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# Cooperative Flax Trials in the Spring Flax Region—1983



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#### ACKNOWLEDGMENTS

Agronomists and plant pathologists in the United States and Canada who are interested in flax improvement have cooperated by growing the Regional Flax nurseries from which the data in this report have been compiled. A list of the cooperating agencies and personnel is given on page 3. The writers of this report wish to express their sincere appreciation to individuals who undertook to grow one or more of these nurseries during the past 45 years.

This publication is a joint report of cooperative investigations by the State Agricultural Experiment Stations, Canadian Department of Agriculture, Canadian Province universities, and the U.S. Department of Agriculture that contains preliminary data, interpretation of which may be modified by additional experimentation.

Copies of this publication may be purchased from the National Technical Information Service, 5285 Port Royal Road, Springfield, Va. 22161.

# COOPERATING AGENCIES, STATIONS, AND PERSONNEL

<u>United States</u> <u>Department of</u> <u>Agriculture,</u> <u>Agricultural</u> <u>Research Service</u>	Northern States Area		K. L. Lebsack* T. C. Olson*
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	Minot	Minot Substation	
	Langdon	Langdon Substation	
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	<u>Biochemistry</u> Fargo	North Dakota State University	H. J. Klosterman D. C. Zimmerman*
<u>South Dakota</u> <u>Agricultural</u> <u>Experiment Station</u>	<u>Plant Science</u> Brookings	South Dakota State University	M. L. Horton C. L. Lay C. D. Dybing*
<u>Minnesota</u> <u>Agricultural</u> <u>Experiment Station</u>	<u>Agronomy and Plant Genetics</u> St. Paul	University of Minnesota	H. W. Johnson V. E. Comstock
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<u>University of</u> <u>Saskatchewan</u>	<u>Crop Science Department</u> Saskatoon		G. G. Rowland
<u>Agriculture Canada</u>	Research Station, Morden, Manitoba		E. O. Kenaschuk J. A. Hoes G. Gubbels

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## COOPERATIVE FLAX TRIALS IN THE SPRING FLAX REGION--1983

By Jerry F. Miller, James J. Hammond, and Thomas J. Gulya<sup>1</sup>

### REGIONAL VARIETAL TRIALS IN 1983

The cooperative Regional Nursery in 1983 consisted of varieties grown in nurseries at 18 locations. The varieties included in the trials are listed in table 1, and the stations from which data were obtained are given in table 2.

This report covers agronomic, disease, and seed quality data reported from the stations in 1983. The Cooperative Regional Nursery has been grown for 45 years from 1939 to 1983, and data have been reported from a total of 1,197 trials. A total of 328 varieties or selections have been grown for 1 or more years.

All data are reported in the metric system. Several conversion factors are shown to aid in converting figures to the other system.

#### Conversion Factors

$0.777 \text{ X g/L} = \text{lb/bu}$

$0.892 \text{ X kg/ha} = \text{lb/acre}$

$0.01593 \text{ X kg/ha} = \text{bu/acre}$

$\text{NMR Reading/wt of sample/constant} = \text{oil\%}$

#### LEAST SIGNIFICANT DIFFERENCE

Plot size and number of replications of the different tests varied, but most plots were near 5 m long with three replications. Least significant differences at the 5-percent point have been calculated for all stations. Average seed yields of the various tests, together with the least significant differences calculated both in kilograms and in percent of the mean, are shown in table 2.

Agronomic data from 20 nurseries by 15 stations are shown in table 3. Varieties are listed in systematic order with a column indicating yield rank. Included with the experimental varieties were four check varieties (Bison, Linott, Culbert, and Dufferin). Additional varieties were included at a number of stations. In table 5 the comparative yield of all varieties at all stations is shown as percent of check.

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TABLE 1.-VARIETIES OF FLAX GROWN IN COOPERATIVE REGIONAL NURSERIES IN 1983

VARIETY OR CROSS	C.I. NUMBER	SOURCE	YEAR ENTERED
BISON(CHECK)	389	NORTH DAKOTA	1927
LINOTT(CHECK)	2522	CANADA	1967
CULBERT(CHECK)	2776	MINNESOTA	1972
DUFFERIN(CHECK)	2814	CANADA	1975
M 903 CULBERT/5017	2938	MINNESOTA	1981
SD009 CI2790/N419	2943	SOUTH DAKOTA	1981
M118 CI2538 L11	3055	MINNESOTA	1982
SD 8123 CI1095/CULBERT//WISHEK	3056	SOUTH DAKOTA	1982
SD 8122 CI2791/CULBERT 79	3059	SOUTH DAKOTA	1982
U120 M3P3 794-1 CULBERT/BISON	3064	NORTH DAKOTA	1982
NORMAN FP707 FP579/LINOTT	3065	CANADA	1982
M205 Mec/Nrd//11/23	3088	MINNESOTA	1983
U215 H13/C1b79 H37	3089	NORTH DAKOTA	1983
U218 H15//Duf/C1b H34	3090	NORTH DAKOTA	1983
U226 H40//Duf/C1b H8	3091	NORTH DAKOTA	1983
SD8203 M7606//CI2840/M3250	3092	SOUTH DAKOTA	1983
SD8205 M7605//CI2840/C1b79	3093	SOUTH DAKOTA	1983
SD8209 N507//M3250/CI2799	3094	SOUTH DAKOTA	1983
SD8211 N507//CI2820/C1b 79	3095	SOUTH DAKOTA	1983
N213 CI2847/Culbert 79	3096	NORTH DAKOTA	1983
N223 Wishek/Nored	3097	NORTH DAKOTA	1983

## ADDITIONAL VARIETIES\*\*\*\*\*

NORSTAR	2290
FLOR	2896
CLARK	2925

TABLE 2. AVERAGE YIELDS OF SEED, LEAST SIGNIFICANT DIFFERENCES AND PAGE NUMBERS OF DATA TABLES FROM STATIONS IN 1983

STATION	AVG. YIELD KG/HA	LSD (.05) KG PERCENT	PAGE NO. OF TABLE
MINNESOTA			
ST. PAUL (EARLY)	747	156 21	5
LAMBERTON (EARLY)	1497	260 17	5
LAMBERTON (LATE)	882	315 36	5
MORRIS (EARLY)	1817	99 5	6
MORRIS (LATE)	383	160 42	6
CROOKSTON (EARLY)	393	195 50	6
STEPHEN (EARLY)	883	225 25	7
SOUTH DAKOTA			
BROOKINGS (EARLY)	1656	177 11	7
NORTH DAKOTA			
FARGO (EARLY)	1238	145 12	7
FARGO (LATE)	417	195 47	8
CARRINGTON (EARLY)	1066	430 40	8
MINOT (EARLY)	1577	170 11	8
LANGDON (EARLY)	1867	190 10	9
MONTANA			
SIDNEY (EARLY)	1028	212 21	9
MANITOBA			
MORDEN (EARLY)	1462	140 10	9
MORDEN (LATE)	968	146 15	10
PORTAGE (EARLY)	1922	138 7	10
PORTAGE (LATE)	1554	138 9	10
WINNIPEG (EARLY)	1921	167 9	11
SASKATOON (EARLY)	1164	146 13	11



TABLE 3.-YIELD AND DATA FOR FLAX VARIETIES AND SELECTIONS GROWN IN  
REGIONAL TRIALS IN 1983 AT DIFFERENT LOCATIONS

ST. PAUL, MINNESOTA (EARLY)										SEEDED 5/ 4 HARVESTED					2.2300 SQUARE METERS		
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L G	W T	W T	TEST G/L	1000 SEED GMS	OIL %	IODINE VALUE	YIELD		KG PER HA	%	CHECKS
		YEARS	FIRST BLOOM	FULL BLOOM									RANK	PER HA			
389	40	51	57		54			4	6				21	547	76		
2522	16	49	55		55			5	6				4	854	118		
2776	11	48	54		52			3	3				14	701	97		
2814	8	52	58		65			2	2				11	784	109		
2938	3	49	55		57			2	2				16	670	93		
2943	3	52	57		63			4	5				12	773	107		
3055	2	48	54		63			3	3				3	869	120		
3056	2	51	55		58			4	4				17	643	89		
3059	2	50	55		61			2	4				20	569	79		
3064	2	50	55		57			2	3				13	719	100		
3065	2	52	57		57			5	5				8	804	111		
3088	1	53	58		58			2	2				7	813	113		
3089	1	50	56		60			2	2				15	679	94		
3090	1	53	58		57			4	5				18	636	88		
3091	1	48	53		53			2	3				19	578	80		
3092	1	50	55		54			2	4				5	836	116		
3093	1	49	54		61			2	2				6	834	116		
3094	1	50	56		59			2	4				9	802	111		
3095	1	51	56		63			4	6				1	905	125		
3096	1	51	56		54			3	4				2	876	121		
3097	1	50	56		66			2	3				9	802	111		
2290	19	51	57		62			1	2					769			
2896	6	53	59		63			2	2					829			
2925	4	50	55		66			2	5					614			

STATION AVERAGE 747 KG PER HECTARE;LSD(.05) = 156 KG/HA. ; F = 3.7084

LAMBERTON ,MINNESOTA (EARLY)										SEEDED 5/ 5 HARVESTED					2.2300 SQUARE METERS		
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L G	W T	W T	TEST G/L	1000 SEED GMS	OIL %	IODINE VALUE	YIELD		KG PER HA	%	CHECKS
		YEARS	FIRST BLOOM	FULL BLOOM									RANK	PER HA			
389	21	51			60					379			21	1266	87		
2522	14	48			56					383			19	1339	92		
2776	12	48			56					387			11	1503	103		
2814	9	55			60					396			1	1745	119		
2938	3	49			59					394			2	1669	114		
2943	3	50			61					399			4	1647	113		
3055	2	48			57					385			9	1535	105		
3056	2	50			61					389			5	1587	108		
3059	2	49			63					398			14	1473	101		
3064	2	49			57					381			6	1585	108		
3065	2	52			58					391			12	1502	103		
3088	1	53			53					413			18	1390	95		
3089	1	48			57					392			10	1508	103		
3090	1	52			60					373			8	1560	107		
3091	1	48			54					387			16	1412	96		
3092	1	49			58					387			20	1281	88		
3093	1	49			60					385			17	1408	96		
3094	1	49			59					383			3	1659	113		
3095	1	50			56					389			15	1415	97		
3096	1	49			58					390			7	1562	107		
3097	1	49			58					377			13	1475	101		
2290	20	50			61									1481			
2896	6	53			57									1502			
2925	4	49			55									1420			

STATION AVERAGE 1497 KG PER HECTARE;LSD(.05) = 260 KG/HA. ; F = 1.7037

LAMBERTON ,MINNESOTA (LATE )										SEEDED 6/ 1 HARVESTED					2.2300 SQUARE METERS		
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L G	W T	W T	TEST G/L	1000 SEED GMS	OIL %	IODINE VALUE	YIELD		KG PER HA	%	CHECKS
		YEARS	FIRST BLOOM	FULL BLOOM									RANK	PER HA			
389	16	42			62								16	832	92		
2522	12	41			61								13	868	96		
2776	9	40			59								10	890	98		
2814	6	46			67								2	1043	115		
2938	3	40			58								6	917	101		
2943	3	44			60								5	953	105		
3055	2	41			63								19	708	78		
3056	2	42			59								17	807	89		
3059	2	42			64								10	890	98		
3064	2	43			58								8	908	100		
3065	2	45			60								14	852	94		
3088	1	44			59								1	1164	128		
3089	1	43			64								6	917	101		
3090	1	44			60								9	896	99		
3091	1	41			60								21	672	74		
3092	1	42			65								20	674	74		
3093	1	40			65								18	790	87		
3094	1	41			62								12	869	96		
3095	1	43			65								15	834	92		
3096	1	43			59								4	1032	114		
3097	1	44			59								3	1038	114		
2290	15	44			61									614			
2896	4	45			64									976			
2925	4	41			57									1007			

STATION AVERAGE 882 KG PER HECTARE;LSD(.05) = 315 KG/HA. ; F = 1.3833

TABLE 3.-YIELD AND DATA FOR FLAX VARIETIES AND SELECTIONS GROWN IN  
REGIONAL TRIALS IN 1983 AT DIFFERENT LOCATIONS--Con.

MORRIS ,MINNESOTA (EARLY)										SEEDED 5/10 HARVESTED					2.2300 SQUARE METERS		
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L W W			TEST G/L	1000 SEED WT GMS	OIL %	IODINE		YIELD VALUE	KG PER HA	%	CHECKS
		YEARS	FIRST BLOOM	FULL BLOOM		D	L	I									
389	42	52	56														
2522	15	48	52														
2776	10	48	52														
2814	7	56	59														
2938	2	48	53														
2943	2	52	56														
3055	2	48	52														
3056	2	52	56														
3059	2	48	53														
3064	2	52	56														
3065	2	56	59														
3088	1	53	57														
3089	1	49	53														
3090	1	56	59														
3091	1	48	52														
3092	1	51	55														
3093	1	48	52														
3094	1	50	56														
3095	1	52	56														
3096	1	52	56														
3097	1	52	58														
2290	19	52	58														
2896	5	55	59														
2925	3	48	52														

STATION AVERAGE 1817 KG PER HECTARE;LSD(.05) = 99 KG/HA. ; F = 16.2414

MORRIS ,MINNESOTA (LATE )										SEEDED 5/31 HARVESTED					2.2300 SQUARE METERS		
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L W W			TEST G/L	1000 SEED WT GMS	OIL %	IODINE		YIELD VALUE	KG PER HA	%	CHECKS
		YEARS	FIRST BLOOM	FULL BLOOM		D	L	I									
389	27	49	55														
2522	14	47	52														
2776	9	48	53														
2814	5	55	63														
2938	2	48	54														
2943	2	51	58														
3055	2	48	53														
3056	2	48	53														
3059	2	50	58														
3064	2	51	55														
3065	2	52	56														
3088	1	52	57														
3089	1	50	55														
3090	1	54	58														
3091	1	48	53														
3092	1	51	57														
3093	1	50	54														
3094	1	48	53														
3095	1	50	59														
3096	1	50	54														
3097	1	52	59														
2290	12	52	57														
2896	4	53	59														
2925	2	48	52														

STATION AVERAGE 383 KG PER HECTARE;LSD(.05) = 160 KG/HA. ; F = 10.5295

CROOKSTON ,MINNESOTA (EARLY)										SEEDED 4/27 HARVESTED					2.2300 SQUARE METERS		
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L W W			TEST G/L	1000 SEED WT GMS	OIL %	IODINE		YIELD VALUE	KG PER HA	%	CHECKS
		YEARS	FIRST BLOOM	FULL BLOOM		D	L	I									
389	43	65			50												
2522	16	66			72												
2776	12	68			71												
2814	9	69			62												
2938	3	69			62												
2943	3	68			72												
3055	2	68			44												
3056	2	66			58												
3059	2	65			60												
3064	2	62			56												
3065	2	65			73												
3088	1	70			80												
3089	1	63			64												
3090	1	67			56												
3091	1	61			57												
3092	1	70			61												
3093	1	65			51												
3094	1	70			80												
3095	1	68			44												
3096	1	67			77												
3097	1	68			47												
2290	20	69			60												
2896	6	72			57												
2925	4	65			63												

STATION AVERAGE 393 KG PER HECTARE;LSD(.05) = 195 KG/HA. ; F = 2.5283

TABLE 3.-YIELD AND DATA FOR FLAX VARIETIES AND SELECTIONS GROWN IN  
REGIONAL TRIALS IN 1983 AT DIFFERENT LOCATIONS--Con.

STEPHEN ,MINNESOTA (EARLY)					SEEDED 5/ 4 HARVESTED					1.4900 SQUARE METERS						
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L D G	W I T	W I T G/L	TEST WT GMS	1000 SEED WT GMS	OIL VALUE %	IODINE VALUE %	YIELD			% CHECKS
		FIRST BLOOM	FULL BLOOM	MATURITY									RANK	PER HA	KG	
389	7	67		51									16	856	95	
2522	7	67		48									12	879	98	
2776	7	68		48									9	897	100	
2814	7	69		45									3	957	107	
2938	3	68		48									4	948	106	
2943	3	69		44									18	823	92	
3055	2	70		49									21	722	80	
3056	2	67		51									17	854	95	
3059	2	68		49									10	881	98	
3064	2	66		45									15	865	96	
3065	2	68		44									10	881	98	
3088	1	68		81									20	760	85	
3089	1	67		49									1	1049	117	
3090	1	67		49									8	908	101	
3091	1	66		45									7	917	102	
3092	1	68		51									13	876	98	
3093	1	68		56									2	1033	115	
3094	1	68		53									6	928	103	
3095	1	67		49									14	874	97	
3096	1	68		48									5	930	104	
3097	1	68		53									19	814	91	
2290	7	69		50										825		
2896	6	70		55										863		
2925	4	67		46										841		
STATION AVERAGE		883 KG PER HECTARE;LSD(.05) = 225 KG/HA. ; F = 0.8437														

STATION AVERAGE 883 KG PER HECTARE;LSD(.05) = 225 KG/HA. ; F = 0.8437

BROOKINGS ,SOUTH DAKOTA (EARLY)						SEEDED 5/ 4 HARVESTED					2.6000 SQUARE METERS				
CI	YEARS	DAYS FROM SOWING TO		HEIGHT	L	W	W	TEST	1000 SEED	OIL	IODINE	YIELD	KG	% CHECKS	
		FIRST	FULL												D
NUMBER	GROWN	BLOOM	BLOOM	MATURITY	CM	G	L	T	G/L	GMS	%				
389	44		54		63	4	2	8		382	167	21	1325	84	
2522	17		52		56	3	2	9		396	176	18	1502	95	
2776	12		52		49	1	1	8		403	180	8	1728	110	
2814	9		57		63	3	2	9		403	172	5	1753	111	
2938	3		51		55	2	2	8		405	170	4	1758	111	
2943	3		54		56	1	1	7		406	175	3	1765	112	
3055	2		52		58	1	1	7		400	170	15	1641	104	
3056	2		54		60	1	3	8		406	179	17	1557	99	
3059	2		54		57	1	1	6		411	175	12	1688	107	
3064	2		54		58	1	2	8		400	170	7	1729	110	
3065	2		53		49	2	2	7		399	171	1	1914	121	
3088	1		55		57	1	1	8		412	171	16	1591	101	
3089	1		53		56	2	1	7		399	178	10	1696	108	
3090	1		55		60	1	1	8		384	178	11	1693	107	
3091	1		51		51	1	2	8		402	177	9	1723	109	
3092	1		54		57	1	3	8		393	176	20	1369	87	
3093	1		53		62	2	2	9		395	173	19	1430	91	
3094	1		53		58	1	2	8		396	176	6	1737	110	
3095	1		53		58	2	2	7		400	177	14	1655	105	
3096	1		53		58	2	1	8		405	175	13	1664	106	
3097	1		54		58	2	2	6		389	173	2	1847	117	

STATION AVERAGE 1656 KG PER HECTARE;LSD(.05) = 177 KG/HA. ; F = 5.5821

FARGO ,NORTH DAKOTA (EARLY)					SEEDED 5/ 4 HARVESTED					1.4900 SQUARE METERS				
CI	YEARS	DAYS FROM SOWING TO		HEIGHT	L	W	W	TEST	1000 SEED	OIL	IODINE	YIELD	KG	%
		FIRST BLOOM	FULL BLOOM											
389	42			60	3	7				378		19	1087	91
2522	16			52	4	9				383		18	1134	95
2776	11			53	2	6				393		6	1288	108
2814	9			52	2	6				397		10	1255	105
2938	1			51	1	1				395		8	1281	108
2943	1			51	3	7				398		14	1221	103
3055	10			54	2	5				395		10	1255	105
3056	1			52	4	8				393		9	1275	107
3059	1			55	2	6				405		14	1221	103
3064	1			50	2	5				394		12	1241	104
3065	1			49	4	9				397		20	1060	89
3088	1			47	1	1				424		12	1241	104
3089	1			52	3	7				397		3	1342	113
3090	1			51	2	7				385		16	1201	101
3091	1			51	3	6				402		5	1308	110
3092	1			54	3	9				395		21	959	81
3093	1			58	1	2				399		17	1174	99
3094	1			53	2	6				391		2	1409	118
3095	1			50	3	8				399		6	1288	108
3096	1			51	3	8				398		3	1342	113
3097	1			54	1	4				390		1	1416	119

STATION AVERAGE 1238 KG PER HECTARE;LSD(.05) = 0 KG/HA. ; F = 0.0

TABLE 3.-YIELD AND DATA FOR FLAX VARIETIES AND SELECTIONS GROWN IN  
REGIONAL TRIALS IN 1983 AT DIFFERENT LOCATIONS--Con.

FARGO ,NORTH DAKOTA (LATE )					SEEDED 6/ 5 HARVESTED					14.9000 SQUARE METERS					
CI	YEARS	DAYS FROM SOWING TO			HEIGHT	L	W	W	TEST	1000	OIL	IODINE	YIELD		
		FIRST	FULL	MATURITY		D	L	L		WT			SEED	VALUE	KG
NUMBER	GROWN	BLOOM	BLOOM		CM	G	T	T	G/L	GMS	%	RANK	PER HA	CHECKS	
389	41											3	493	113	
2522	15											11	403	92	
2776	10											14	362	83	
2814	8											5	488	112	
2938	2											15	357	82	
2943	2											16	355	81	
3055	2											10	418	96	
3056	2											7	454	104	
3059	2											6	463	106	
3064	2											21	323	74	
3065	2											18	346	79	
3088	1											2	556	127	
3089	1											19	345	79	
3090	1											8	445	102	
3091	1											3	493	113	
3092	1											9	428	98	
3093	1											13	368	84	
3094	1											17	350	80	
3095	1											1	578	132	
3096	1											20	324	74	
3097	1											12	397	91	
STATION AVERAGE 417 KG PER HECTARE:LSD(.05) = 0 KG/HA. ; F = 0.0															

STATION AVERAGE 417 KG PER HECTARE;LSD(.05) = 0 KG/HA. ; F = 0.0

CARRINGTON,NORTH DAKOTA (EARLY)						SEEDED 5/12 HARVESTED					1.4900 SQUARE METERS				
CI	YEARS	DAYS FROM			HEIGHT	L	W	W	TEST	1000	OIL	IODINE	YIELD		
		SOWING	TO										SEED		VALUE
NUMBER	GROWN	FIRST	FULL	MATURITY	CM	D	L	L	WT	WT	%				
		BLOOM	BLOOM			G	T	T	G/L	GMS			PER	CHECKS	
389	17				62								21	624	65
2522	13				57								12	1020	107
2776	12				55								6	1201	126
2814	6				67								15	966	101
2938	2				64								5	1221	128
2943	2				66								10	1053	111
3055	2				62								19	818	86
3056	2				57								16	953	100
3059	2				66								13	1013	106
3064	2				59								11	1040	109
3065	2				60								4	1241	130
3088	1				60								8	1120	118
3089	1				59								1	1671	175
3090	1				67								2	1295	136
3091	1				57								7	1187	125
3092	1				55								20	805	84
3093	1				59								14	1006	106
3094	1				63								9	1087	114
3095	1				65								18	865	91
3096	1				62								3	1281	134
3097	1				61								17	919	96

STATION AVERAGE 1066 KG PER HECTARE;LSD(.05) = 0 KG/HA. ; F = 0.0

MINOT ,NORTH DAKOTA (EARLY)					SEEDED 5/16 HARVESTED					14.9000 SQUARE METERS					
CI	YEARS	DAYS FROM SOWING TO			HEIGHT	L	W	W	TEST	1000	OIL	IODINE	YIELD		
		FIRST	FULL	MATURITY		D	L	L	WT	SEED					
NUMBER	GROWN	BLOOM	BLOOM		G	T	T	G/L	WT	GMS	%	VALUE	RANK	KG PER HA	% CHECKS
389	17												17	1483	96
2522	13												13	1532	99
2776	11												14	1523	98
2814	7												8	1655	107
2938	3												5	1679	108
2943	3												15	1495	97
3055	2												21	1344	87
3056	2												6	1666	108
3059	2												11	1566	101
3064	2												4	1706	110
3065	2												3	1716	111
3088	1												16	1486	96
3089	1												7	1659	107
3090	1												10	1617	104
3091	1												18	1479	96
3092	1												12	1533	99
3093	1												2	1724	111
3094	1												9	1642	106
3095	1												19	1376	89
3096	1												1	1862	120
3097	1												20	1364	88

STATION AVERAGE 1577 KG PER HECTARE;LSD(.05) = 0 KG/HA. ; F = 0.0

TABLE 3.-YIELD AND DATA FOR FLAX VARIETIES AND SELECTIONS GROWN IN  
REGIONAL TRIALS IN 1983 AT DIFFERENT LOCATIONS--Con.

LANGDON ,NORTH DAKOTA (EARLY)					SEEDED 0/ 0 HARVESTED					1.0000 SQUARE METERS					
CI	YEARS	DAYS FROM SOWING TO			HEIGHT	L	W	W	TEST	1000	OIL	IODINE	YIELD	KG	%
		FIRST	FULL	MATURITY		D	L	L		WT					
NUMBER	GROWN	BLOOM	BLOOM		CM	G	T	T	G/L	GMS	%				
389	5		58		52				720				6	2010	105
2522	5		59		51				694				18	1610	84
2776	5		57		55				707				1	2160	113
2814	5		59		54				707				10	1900	99
2938	3		59		56				727				2	2130	111
2943	3		59		53				720				14	1810	94
3055	2		59		51				720				7	1980	103
3056	2		59		53				733				11	1880	98
3059	2		59		57				720				4	2030	106
3064	2		59		52				727				9	1960	102
3065	2		58		49				707				7	1980	103
3088	1		58		46				714				21	1480	77
3089	1		59		53				727				14	1810	94
3090	1		59		53				720				19	1560	81
3091	1		57		54				733				4	2030	106
3092	1		62		55				727				12	1860	97
3093	1		59		58				720				3	2050	107
3094	1		59		52				733				17	1780	93
3095	1		59		49				720				14	1810	94
3096	1		59		54				720				13	1830	95
3097	1		59		54				714				20	1550	81
STATION AVERAGE 1867 KG PER HECTARE;LSD(.05) = 0 KG/HA. ; F = 0.0															

STATION AVERAGE 1867 KG PER HECTARE;LSD(.05) = 0 KG/HA. ; F = 0.0

SIDNEY ,MONTANA (EARLY)					SEEDED 0/ 0 HARVESTED					10.0000 SQUARE METERS					
CI	YEARS	DAYS FROM SOWING TO			HEIGHT	L W W			TEST	1000 SEED	OIL	IODINE	YIELD	KG	%
		FIRST	FULL	MATURITY		D	L	T							
NUMBER	GROWN	BLOOM	BLOOM		CM	G	T	T	G/L	GMS	%				
389	8				48				691		488		16	838	90
2522	8				45				701		493		1	1070	115
2776	8				48				697		500		9	913	98
2814	8				48				701		501		8	915	98
2938	3				45				697		504		5	1004	107
2943	3				45				692		498		20	773	83
3055	2				50				696		497		16	838	90
3056	2				48				689		494		12	886	95
3059	2				48				697		510		21	735	79
3064	2				43				703		494		14	860	92
3065	2				43				698		494		6	955	102
3088	1				35				692		529		15	839	90
3089	1				43				692		505		10	910	97
3090	1				43				707		488		11	901	96
3091	1				43				691		502		19	774	83
3092	1				48				702		498		4	1010	108
3093	1				48				685		494		16	838	90
3094	1				48				693		491		7	951	102
3095	1				48				682		500		3	1046	112
3096	1				43				705		507		13	872	93
3097	1				45				703		487		2	1047	112
STATION AVERAGE		904 KG PER HECTARE				LSD(.05) = 0 KG/HA. ; F = 0.0									

STATION AVERAGE 904 KG PER HECTARE;LSD(.05) = 0 KG/HA. ; F = 0.0

MORDEN ,MANITOBA (EARLY)					SEEDED 5/24 HARVESTED					3.0700 SQUARE METERS				
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L D G	W I T	W I T G/L	1000 TEST WT GMS	OIL SEED WT GMS	IODINE OIL VALUE %	YIELD RANK	KG PER HA	% CHECKS
		FIRST BLOOM	FULL BLOOM	MATURITY										
389	38	48		84	66	1	4			377	174	19	1322	97
2522	13	46		81	59	1	4			394	183	13	1419	105
2776	11	48		86	58	1	5			398	187	8	1519	112
2814	8	51		85	70	1	7			402	178	21	1171	86
2938	2	49		84	61	1	6			393	181	4	1609	119
2943	2	50		85	63	1	7			398	179	18	1354	100
3055	2	47		82	61	1	6			384	171	15	1409	104
3056	2	49		84	67	1	5			385	183	20	1289	95
3059	2	51		86	67	1	6			396	176	16	1373	101
3064	2	51		85	66	1	4			389	175	12	1441	106
3065	2	49		82	64	1	4			389	174	17	1359	100
3088	1	48		89	56	1	5			417	174	6	1538	113
3089	1	46		84	61	1	4			385	186	3	1618	119
3090	1	49		87	64	1	4			385	179	7	1536	113
3091	1	47		83	59	1	5			382	184	1	1627	120
3092	1	47		82	59	1	3			384	188	10	1500	110
3093	1	47		83	63	1	2			398	180	11	1488	110
3094	1	48		84	63	1	3			377	178	14	1418	104
3095	1	48		86	65	1	2			381	179	9	1518	112
3096	1	48		86	61	1	3			397	180	5	1556	115
3097	1	48		87	64	1	4			390	178	1	1627	120
STATION AVERAGE 1462 KG PER HECTARE;LSD(.05) = 140 KG/HA. ; F = 6.1306														

STATION AVERAGE 1462 KG PER HECTARE;LSD(.05) = 140 KG/HA. ; F = 6.1306



TABLE 3.-YIELD AND DATA FOR FLAX VARIETIES AND SELECTIONS GROWN IN  
REGIONAL TRIALS IN 1983 AT DIFFERENT LOCATIONS--Con.

MORDEN		,MANITOBA		(LATE )		SEEDED 6/ 9 HARVESTED					3.0700 SQUARE METERS					
CI	YEARS	DAYS FROM SOWING TO			HEIGHT	L	W	W	TEST	1000 SEED	OIL	IODINE	YIELD	PER	HA	CHECKS
		FIRST	FULL	MATURITY												
NUMBER	GROWN	BLOOM	BLOOM		CM	G	T	T	G/L	GMS	%					
389	21	42		84	61	2	4				374		14	896		90
2522	12	38		81	58	1	4				386		1	1182		118
2776	10	41		82	60	1	5				381		3	1140		114
2814	7	50		86	65	1	5				390		19	776		78
2938	1	41		82	61	2	4				419		7	1067		107
2943	1	49		85	61	1	7				386		12	961		96
3055	1	47		85	66	1	5				387		21	741		74
3056	1	47		84	64	1	4				388		20	764		77
3059	1	47		85	63	1	6				397		18	801		80
3064	1	48		85	61	1	4				381		16	846		85
3065	1	43		82	63	1	2				359		10	1005		101
3088	1	48		86	59	1	5				382		13	949		95
3089	1	40		79	58	1	3				370		8	1032		103
3090	1	47		85	64	1	5				362		6	1068		107
3091	1	40		80	59	1	4				386		4	1118		112
3092	1	41		80	57	1	3				386		17	844		85
3093	1	41		79	62	2	2				391		11	971		97
3094	1	41		84	64	1	3				379		5	1070		107
3095	1	48		87	67	1	2				382		15	888		89
3096	1	46		85	63	1	2				386		2	1180		118
3097	1	46		85	68	1	4				364		9	1022		102
STATION AVERAGE		968	KG PER	HECTARE;LSD(.05) =			146 KG/HA. ; F =				7.1506					

STATION AVERAGE 968 KG PER HECTARE;LSD(.05) = 146 KG/HA. ; F = 7.1506

PORTAGE ,MANITOBA (EARLY)				SEEDED 5/18 HARVESTED					4.6000 SQUARE METERS					
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO		HEIGHT CM	L D G	W I L	W I L	TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD		
		FIRST BLOOM	FULL BLOOM									MATURITY	RANK	PER HA
389	8	57	94	72	1					341		13	1902	99
2522	8	55	92	69	1					380		1	2090	109
2776	8	56	92	68	1					385		20	1785	93
2814	8	59	97	77	1					398		12	1915	100
2938	3	56	92	71	1					369		2	2088	109
2943	3	58	94	69	1					386		15	1874	97
3055	2	57	92	69	1					382		10	1965	102
3056	2	57	94	72	1					382		21	1676	87
3059	2	59	93	73	1					390		14	1895	99
3064	2	57	92	71	1					383		7	1972	103
3065	2	57	92	67	1					375		17	1836	95
3088	1	59	96	61	1					390		11	1928	100
3089	1	57	93	68	1					381		9	1968	102
3090	1	57	96	73	1					381		6	1981	103
3091	1	56	92	64	1					366		18	1815	94
3092	1	59	94	68	1					387		16	1867	97
3093	1	58	94	71	1					379		5	1989	103
3094	1	58	92	67	1					373		4	2003	104
3095	1	57	94	74	1					378		3	2019	105
3096	1	57	94	68	1					398		8	1970	102
3097	1	57	97	73	1					372		19	1805	94

STATION AVERAGE 1922 KG PER HECTARE;LSD(.05) = 138 KG/HA. ; F = 4.2906

PORTAGE		,MANITOBA		(LATE)		SEEDED 6/ 6 HARVESTED					4.6000 SQUARE METERS				
CI	YEARS	DAYS FROM			HEIGHT	L	W	W	TEST	1000	OIL	IODINE	YIELD		
		FIRST	FULL	MATURITY									SEED	VALUE	KG
NUMBER	GROWN	BLOOM	BLOOM		CM	G	T	T	G/L	WT	%	RANK	PER HA	CHECKS	
389	6	48		82	71	1					371		18	1444	92
2522	6	42		78	64	1					391		3	1757	112
2776	6	45		81	64	1					387		8	1603	103
2814	6	53		87	75	1					404		17	1448	93
2938	1	49		81	65	1					396		2	1795	115
2943	1	51		86	75	1					403		14	1483	95
3055	1	49		84	75	1					406		12	1524	98
3056	1	49		85	75	1					366		19	1401	90
3059	1	49		86	72	1					416		10	1563	100
3064	1	49		84	71	1					396		16	1459	93
3065	1	49		83	71	1					385		11	1544	99
3088	1	52		90	71	2					418		13	1505	96
3089	1	46		81	67	1					390		1	1813	116
3090	1	52		88	74	2					379		15	1478	95
3091	1	44		80	63	1					397		5	1728	111
3092	1	44		79	65	1					398		6	1644	105
3093	1	43		80	66	1					385		7	1639	105
3094	1	47		86	73	1					385		9	1599	102
3095	1	54		90	74	3					386		21	1173	75
3096	1	49		87	71	1					405		4	1746	112
3097	1	52		90	72	3					385		20	1279	82

STATION AVERAGE 1554 KG PER HECTARE;LSD(.05) = 138 KG/HA. ; F = 11.3878



TABLE 3.-YIELD AND DATA FOR FLAX VARIETIES AND SELECTIONS GROWN IN  
REGIONAL TRIALS IN 1983 AT DIFFERENT LOCATIONS--Con.

WINNIPEG ,MANITOBA (EARLY)										SEEDED 5/ 9 HARVESTED				3.0700 SQUARE METERS			
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L W W			TEST WT G/L	1000 SEED GMS		OIL VALUE	IODINE YIELD		RANK	PER HA	KG CHECKS
		FIRST BLOOM	FULL BLOOM	MATURITY		D G	I T	I T									
389	14			99	75				672	66					21	1758	95
2522	12			92	67				688	60					19	1802	97
2776	9			101	67				698	63					13	1926	104
2814	6			92	72				690	62					9	1955	105
2938	3			99	74				686	62					7	1970	106
2943	3			93	71				684	66					3	2040	110
3055	2			101	66				692	68					5	1978	106
3056	2			92	73				680	65					16	1828	98
3059	2			101	72				676	63					17	1818	98
3064	2			97	68				686	62					14	1876	101
3065	2			92	63				688	63					5	1978	106
3088	1			99	65				676	71					15	1842	99
3089	1			97	70				680	65					12	1933	104
3090	1			92	66				688	65					1	2095	113
3091	1			97	63				688	63					10	1948	105
3092	1			93	63				692	61					20	1789	96
3093	1			99	75				688	70					18	1811	97
3094	1			92	68				686	65					11	1938	104
3095	1			92	65				688	76					4	2022	109
3096	1			97	72				684	65					2	2057	111
3097	1			92	68				686	65					8	1964	106

STATION AVERAGE 1921 KG PER HECTARE;LSD(.05) = 167 KG/HA. ; F = 2.6218

SASKATOON ,SASKATHEWAN (EARLY)										SEEDED 5/26 HARVESTED				5.2000 SQUARE METERS			
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L W W			TEST WT G/L	1000 SEED GMS		OIL VALUE	IODINE YIELD		RANK	PER HA	KG CHECKS
		FIRST BLOOM	FULL BLOOM	MATURITY		D G	I T	I T									
389	13			68	2	54				51					21	974	90
2522	13			65	1	52				49					7	1201	110
2776	10			67	1	54				50					20	1020	94
2814	9			67	3	55				49					10	1157	106
2938	3			69	2	53				50					17	1097	101
2943	3			69	2	48				50					5	1213	111
3055	2			69	1	52				49					12	1152	106
3056	2			69	3	50				51					14	1148	106
3059	2			69	3	50				50					19	1053	97
3064	2			67	1	52				47					4	1265	116
3065	2			67	1	48				48					3	1295	119
3088	1			69	3	43				52					13	1149	106
3089	1			65	1	42				50					6	1206	111
3090	1			65	1	56				50					1	1359	125
3091	1			67	1	44				51					15	1112	102
3092	1			68	2	51				45					16	1108	102
3093	1			67	2	52				52					8	1199	110
3094	1			69	1	53				50					9	1191	109
3095	1			69	2	46				53					18	1066	98
3096	1			67	2	56				47					2	1312	121
3097	1			71	2	49				48					11	1154	106

STATION AVERAGE 1164 KG PER HECTARE;LSD(.05) = 146 KG/HA. ; F = 3.4489



TABLE 6.--STATE AVERAGES

CI	MINNESOTA			SOUTH DAKOTA			NORTH DAKOTA			MANITOBA			OTHERS			ALL STATIONS		
	EARLY	LATE	ALL	EARLY	LATE	ALL	EARLY	LATE	ALL	EARLY	LATE	ALL	EARLY	LATE	ALL	EARLY	LATE	ALL
OVER 1 YEAR																		
389	956	507	828	1325	0	1325	1301	493	1139	1660	1170	1464	906	0	906	1207	769	1097
2522	1055	721	959	1502	0	1502	1324	403	1139	1770	1469	1650	1135	0	1135	1310	957	1222
2776	1070	734	974	1728	0	1728	1543	362	1306	1743	1371	1594	966	0	966	1361	914	1249
2814	1140	545	970	1753	0	1753	1444	488	1252	1680	1112	1453	1036	0	1036	1356	760	1207
2938	1145	816	1051	1758	0	1758	1577	357	1333	1889	1431	1705	1050	0	1050	1437	970	1320
2943	1119	622	977	1765	0	1765	1394	355	1186	1756	1222	1542	993	0	993	1346	808	1211
3055	1106	536	943	1641	0	1641	1349	418	1163	1784	1132	1523	995	0	995	1327	751	1183
3056	1054	650	939	1557	0	1557	1443	454	1245	1597	1082	1391	1017	0	1017	1295	784	1167
3059	1032	650	923	1688	0	1688	1457	463	1258	1695	1182	1490	894	0	894	1303	825	1184
3064	1115	665	987	1729	0	1729	1486	323	1254	1763	1152	1518	1062	0	1062	1377	791	1231
3065	1098	565	946	1914	0	1914	1499	346	1268	1724	1274	1544	1125	0	1125	1388	805	1242
3088	945	841	915	1591	0	1591	1331	556	1176	1769	1227	1552	994	0	994	1262	938	1181
3089	1104	658	977	1696	0	1696	1620	345	1365	1839	1422	1672	1058	0	1058	1422	901	1292
3090	1077	700	969	1693	0	1693	1418	445	1223	1870	1273	1631	1130	0	1130	1374	878	1250
3091	1060	640	940	1723	0	1723	1501	493	1299	1796	1423	1647	943	0	943	1353	924	1246
3092	961	443	813	1369	0	1369	1289	428	1117	1718	1244	1528	1059	0	1059	1240	760	1120
3093	1131	604	980	1430	0	1430	1488	368	1264	1762	1305	1579	1018	0	1018	1357	837	1227
3094	1109	671	983	1737	0	1737	1479	350	1253	1786	1334	1605	1071	0	1071	1380	872	1253
3095	1077	476	905	1655	0	1655	1334	578	1183	1853	1030	1524	1056	0	1056	1336	718	1182
3096	1127	800	1033	1664	0	1664	1578	324	1327	1861	1463	1701	1092	0	1092	1425	970	1311
3097	1017	596	897	1847	0	1847	1312	397	1129	1798	1150	1539	1100	0	1100	1318	778	1183
OVER 2 YEARS																		
389	1191	905	1109	1451	0	1451	1256	479	1115	1646	1170	1527	1114	0	1114	1311	865	1217
2522	1203	1098	1173	1569	0	1569	1180	444	1046	1884	1469	1780	1168	0	1168	1353	1027	1285
2776	1258	1139	1224	1714	0	1714	1320	527	1176	1829	1371	1715	1056	0	1056	1401	1044	1326
2814	1345	1029	1255	1807	0	1807	1295	328	1119	1871	1112	1681	1132	0	1132	1445	874	1325
2938	1365	2348	1646	1812	0	1812	1437	494	1265	2001	1431	1858	1228	0	1228	1530	1655	1556
2943	1367	1112	1294	1797	0	1797	1358	500	1202	1978	1222	1789	1172	0	1172	1495	986	1388
3055	1358	1100	1284	1663	0	1663	1357	469	1196	2022	1132	1799	1120	0	1120	1487	950	1374
3056	1279	1037	1210	1719	0	1719	1323	538	1180	1735	1082	1572	1118	0	1118	1396	923	1297
3059	1635	1128	1490	1662	0	1662	1360	531	1209	1960	1182	1765	1072	0	1072	1563	992	1443
3064	1355	1084	1278	1773	0	1773	1360	589	1220	1857	1152	1680	1200	0	1200	1469	977	1366
3065	1350	1141	1290	1904	0	1904	1390	498	1228	1905	1274	1747	1268	0	1268	1502	1014	1399
OVER 3 YEARS																		
389	1128	873	1064	944	567	868	1183	479	1082	1571	1170	1491	1116	0	1116	1207	823	1135
2522	1165	1072	1142	1083	649	996	1113	444	1018	1794	1469	1729	1157	0	1157	1259	984	1207
2776	1178	1110	1161	1048	628	964	1280	527	1173	1737	1371	1664	1060	0	1060	1287	997	1233
2814	1300	939	1209	1152	696	1061	1301	328	1162	1792	1112	1656	1134	0	1134	1363	827	1262
2938	1280	2093	1483	1145	637	1043	1350	494	1228	1903	1431	1809	1217	0	1217	1397	1495	1415
2943	1288	1056	1230	1121	609	1018	1283	500	1171	1846	1222	1721	1174	0	1174	1364	933	1283

TABLE 7.--SUMMARY OF AGRONOMIC DATA OTHER THAN YIELD FOR VARIETIES OF FLAX GROWN IN THE COOPERATIVE REGIONAL TRIALS IN 1983

VARIETY OR C.I. NO.	DAYS FROM SOWING TO			HEIGHT AVG. (CM)	PASMO RATING (1 = BEST)	LODGING RATING (1 = BEST)
	FIRST BLOOM	FULL BLOOM	MATURITY			
	AVG. (DAYS)	AVG. (DAYS)	AVG. (DAYS)			
BISON	52	58	89	60	2	2
LINOTT	50	56	85	56	2	1
CULBERT	51	56	90	55	1	1
DUFFERIN	56	61	90	61	2	2
2938	52	57	88	58	2	2
2943	54	59	89	58	2	1
3055	52	57	91	59	1	1
3056	53	58	88	59	3	1
3059	53	58	92	60	1	1
3064	53	58	89	57	2	1
3065	54	58	87	56	2	1
3088	55	59	93	54	1	1
3089	51	57	88	57	2	1
3090	55	59	90	59	1	2
3091	50	56	87	54	2	1
3092	52	59	86	57	3	1
3093	51	57	87	61	2	2
3094	52	58	88	59	2	1
3095	54	59	90	59	3	2
3096	53	58	90	57	1	1
3097	54	60	90	60	2	2
NO. OF TESTS	11	6	5	16	1	5

TABLE 8.--SUMMARY OF RESISTANCE TO FUSARIUM WILT FOR VARIETIES GROWN IN COOPERATIVE TRIALS  
IN 1983 AND A 2- AND 3-YEAR MEAN

VARIETY OR C. I. NO.	1982				TWO-YEAR MEAN				THREE-YEAR MEAN			
	ST. PAUL, MN		FARGO ND	MORDEN MAN	ST. PAUL, MN		FARGO ND	MORDEN MAN	ST. PAUL, MN		FARGO ND	MORDEN MAN
	BREED- ING	PL. PATH			BREED- ING	PL. PATH			BREED- ING	PL. PATH		
BISON	4	6	5	4	4	4	5	4	4	4	5	3
LINOTT	5	6	7	4	5	6	8	3	5	5	7	3
CULBERT	3	3	4	5	2	3	4	5	2	4	4	4
DUFFERIN	2	2	4	6	2	2	4	5	2	2	4	4
2938	2	2	1	6	2	2	1	5	1	2	1	4
2943	4	5	5	7	4	4	5	5	4	3	5	4
3055	3	3	4	6	2	2	4	5				
3056	4	4	6	5	3	4	7	4				
3059	4	4	4	6	3	3	4	5				
3064	3	3	4	4	3	3	4	3				
3065	5	5	7	4	4	4	7	3				
3088	2	2	1	5								
3089	2	2	5	4								
3090	4	5	5	5								
3091	2	3	5	5								
3092	2	4	6	3								
3093	2	2	2	3								
3094	2	4	4	3								
3095	4	6	6	3								
3096	3	4	6	3								
3097	2	3	3	4								

TABLE 9.--SUMMARY OF OIL PERCENTAGES OF FLAXSEED ENTRIES IN THE 1983 REGIONAL TRIALS,  
2- AND 3-YEAR MEAN

VARIETY OR C. I. NO.	LAMBERTON	MORRIS	BROOKINGS	FARGO	MORDEN	PORTAGE	SIDNEY	MEAN % 7 LOCATIONS	TWO- YEAR MEAN	THREE- YEAR MEAN
	MN (E)	MN (E)	SD (E)	ND (E)	MAN (E)	MAN (E)	MT (E)			
BISON	37.9	38.3	38.2	37.8	37.7	34.1	48.8	39.0	39.7	40.8
LINOTT	38.3	39.5	39.6	38.3	39.4	38.0	49.3	40.3	40.8	41.8
CULBERT	38.7	39.9	40.3	39.3	39.8	38.5	50.0	40.9	41.5	42.6
DUFFERIN	39.6	40.0	40.3	39.7	40.2	39.8	50.1	41.4	42.0	43.1
2938	39.4	40.0	40.5	39.5	39.3	36.9	50.4	40.9	41.3	42.5
2943	39.9	40.1	40.6	39.8	39.8	38.6	49.8	41.2	41.7	42.9
3055	38.5	39.6	40.0	39.5	38.4	38.2	49.7	40.6	40.8	
3056	38.9	39.3	40.6	39.3	38.5	38.2	49.4	40.6	41.1	
3059	39.8	40.6	41.1	40.5	39.6	39.0	51.0	41.7	42.1	
3064	38.1	39.3	40.0	39.4	38.9	38.3	49.4	40.5	40.9	
3065	39.1	40.0	39.9	39.7	38.9	37.5	49.4	40.6	41.0	
3088	41.3	42.4	41.2	42.4	41.7	39.0	52.9	43.0		
3089	39.2	40.0	39.9	39.7	38.5	38.1	50.5	40.8		
3090	37.3	38.9	38.4	38.5	38.5	38.1	48.8	38.8		
3091	38.7	40.3	40.2	40.2	38.2	36.6	50.2	40.6		
3092	38.7	39.7	39.3	39.5	38.4	38.7	49.8	40.6		
3093	38.5	39.5	39.5	39.9	39.8	37.9	49.4	40.6		
3094	38.3	38.7	39.6	39.1	37.7	37.3	49.1	40.0		
3095	38.9	40.2	40.0	39.9	38.1	37.8	50.0	40.7		
3096	39.0	40.1	40.5	39.8	37.7	39.8	50.7	41.1		
3097	37.7	38.1	38.9	39.0	39.0	37.2	48.7	39.8		



TABLE 10.--SUMMARY OF IODINE VALUES FOR FLAXSEED PRODUCED AT FOUR LOCATIONS  
IN THE 1983 REGIONAL TRIALS

VARIETY OR C.I. NO.	BROOKINGS	MORRIS	FARGO	MORDEN	MEAN 4 LOCATIONS
BISON	167	166	164	174	168
LINOTT	176	154	177	183	173
CULBERT	180	158	182	187	177
DUFFERIN	172	153	174	178	169
2938	170	171	173	181	174
2943	175	176	173	179	176
3055	170	166	164	171	168
3056	179	180	181	183	181
3059	175	171	171	176	173
3064	170	169	170	175	171
3065	171	171	170	174	172
3088	171	173	173	174	173
3089	178	182	180	186	182
3090	178	182	181	179	180
3091	177	179	177	184	179
3092	176	176	175	188	179
3093	173	175	170	180	175
3094	176	176	177	178	177
3095	177	176	177	179	177
3096	175	180	177	180	178
3097	173	177	173	178	175

TABLE 11.--1983 FLAX REGIONAL TRIAL - RUST EVALUATION

Flax variety	Rust Race											
	371	1	22	191	259	263	358	x3 <sup>a</sup>	x10 <sup>a</sup>	x23 <sup>a</sup>	218332 <sup>a</sup>	218S61 <sup>a</sup>
389	S	S	S	S	S	S	S	S	S	S	S	S
2522	R	R	S	R	R	R	R	S	S	R	S	S
2776	R	R	S	S	S	S	S	S	S	R	S	S
2814	R	R	S	R	R	R	R	R	R	R	R	R
2938	R	R	S	S	S	S	S	S	S	R	S	S
2943	R	R	S	R	R	S	R	R	R	R	R	R
3055	R	R	S	R	S	S	R*	S	S	R	S	S
3056	R	R	S	S	S	S	S	S	S	R	S	S
3059	R*	R	S	S	S	S	S	R	S	R	R	S
3064	R	R	S	R	R	R*	R*	R	R	R	R	R
3065	R	R	S	R	R	S	R	R	R	R	R	R
3088	R	R	R	R	R	R	R	R	R	R	R	R
3089	R	R	S	S	S	S	S	S	R	R	S	S
3090	R	R	S	S	S	S	R	R	R	R	R	S
3091	R	R	S	S	S	S	S	S	S	R	S	S
3092	R	R	S	S	S	S	S	S	R	R	R	S
3093	R	R	R	R	R	R	R	R	R	R	R	R
3094	R	R	S	S	S	S	S	S	S	R	S	S
3095	R	R*	S	S	S	S	S	S	S	R	S	S
3096	R	R	S	S	S	S	S	S	S	R	S	S
3097	R*	R	S	R	R	S	R	R	R	R	R	R

\* 5-15% susceptible, from genetic or physical admixture.

<sup>a</sup> Tester races developed by G. D. Statler (Farm Res. 39(2):5-7, 1981).







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